

# AQA Geography A-level

## 3.2.3: Contemporary Urban Environments

Detailed Notes



## Urbanisation

**Urbanisation** is defined as the **increase of the proportion of people moving to urban areas**.



There is no **standard definition** of a rural or urban area, therefore there may be some **ambiguity** as to what some areas should be defined as.

However in general, **urban** areas are **towns or cities** which have a **high population density** and the majority of the employment is **not in agriculture**. **Rural** areas are **small villages, hamlets and areas of land** with a **low population density**. If an area is not urban, it is rural (and vice versa - the two are mutually exclusive).



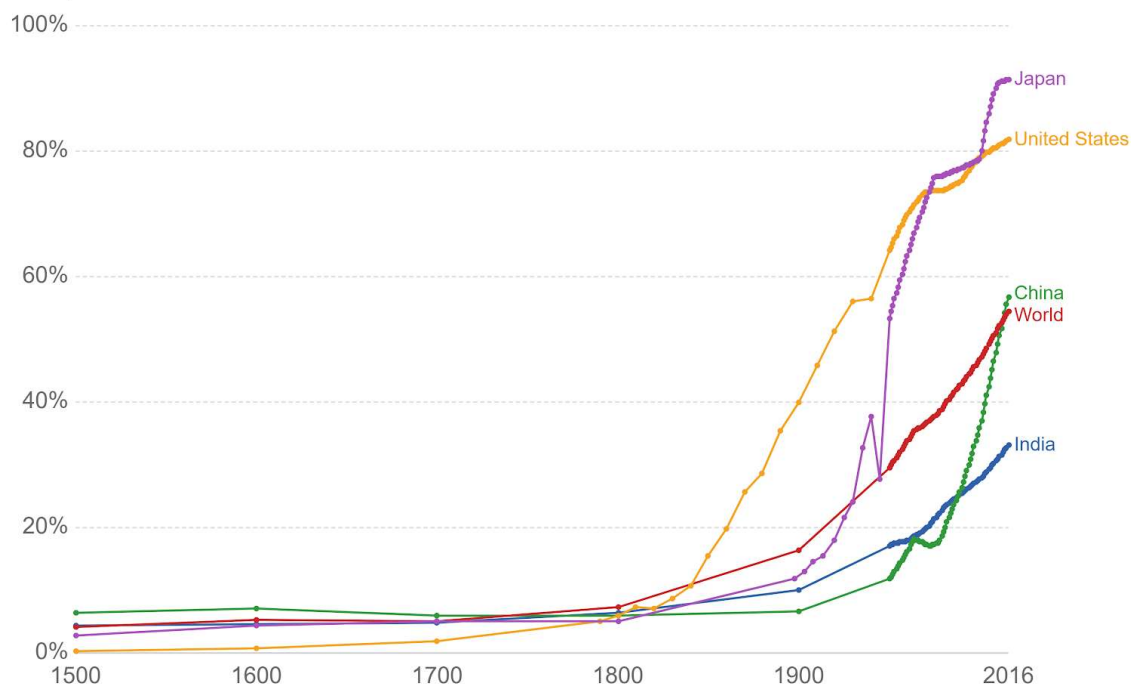
### Global Patterns of Urbanisation

Urban populations have stayed **relatively constant** in the past 500 years until post-1800, where urban populations began to increase (especially in high income countries which were developing at a faster rate). Globally, urbanisation rates began to grow rapidly in the mid-20th century. The **amount of people moving to urban areas is increasing** globally.

### Urbanization over the past 500 years

Our World  
in Data

Share of the total population living in urban areas. Urban areas are based on national definitions and may vary by country.

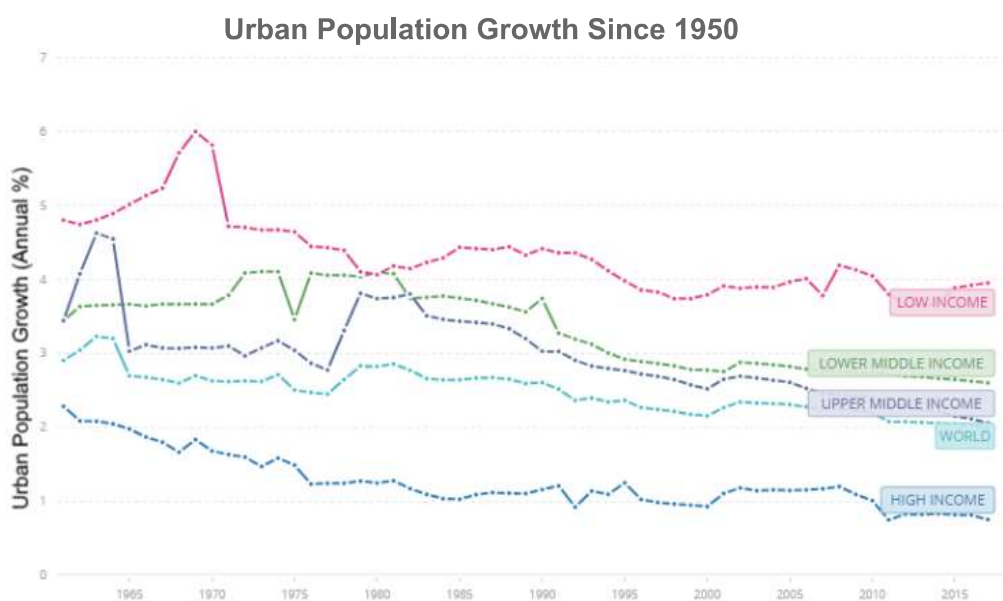
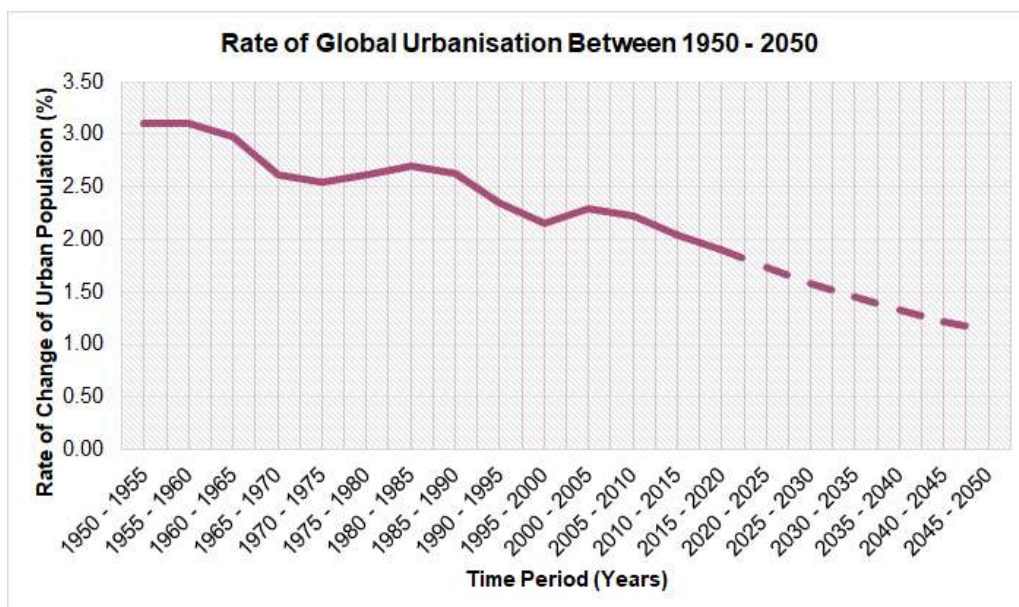


Source: OWID based on UN World Urbanization Prospects 2018 and historical sources (see Sources)

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The **rate of urbanisation** is **decreasing**, and the **rate of rural to urban migration** is **decreasing also**, meaning population growth in urban areas is **slowing**.



(Source: <https://data.worldbank.org>)

On a global scale, there are more people living in **urban** areas than **rural** areas.

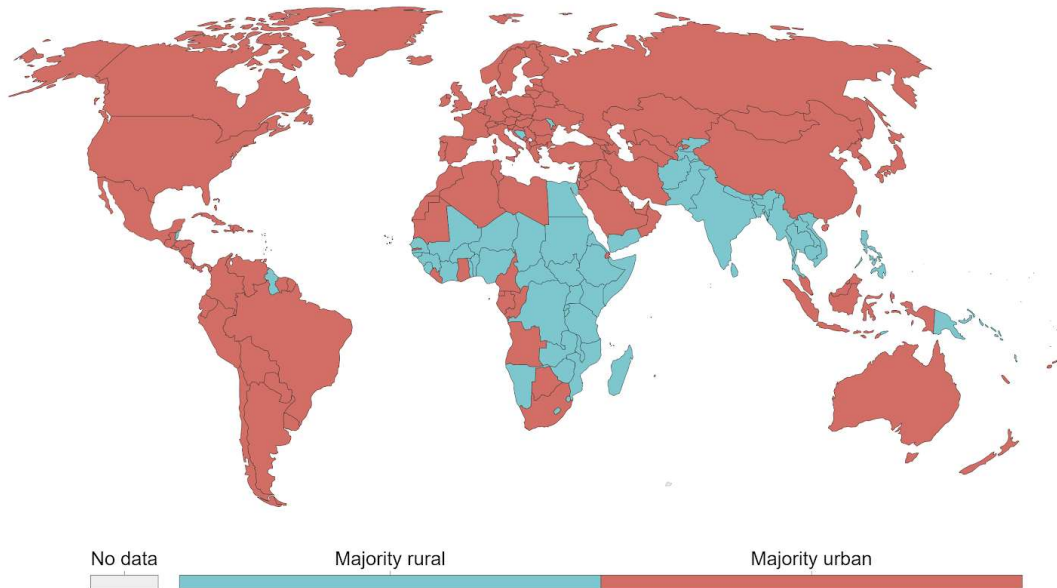
- **55% of people live in urban areas** which is a 25% increase from 1950.
- Urban populations are expected to increase even more by 2050 to 68%.
- Since 1950, the world's **urban population** has increased from **750 million people to 4.2 billion**. More urbanisation statistics and information can be explored [here](https://population.un.org/wup/) (<https://population.un.org/wup/>)
- Usually, the proportion of those living in urban areas is higher in HICs than LICs.



## Do more people live in urban or rural areas?, 2016

Our World  
in Data

Share of the population which live in urban versus rural areas. Here, 'majority urban' indicates more than 50 percent of the population live in urban centres; 'majority rural' indicates less than 50 percent. Urban populations are defined based on the definition of urban areas by national statistical offices. This is based on estimates to 2016, combined with UN projections to 2050.



Source: OWID based on UN World Urbanization Prospects (2018) & Historical Sources (see Sources tab)  
OurWorldInData.org/urbanization • CC BY

**Global urbanisation continues to increase**; **suburban** areas are becoming more **urbanised**, and surrounding **rural** areas are becoming **suburbanised** (the process of an urban area spreading and becoming larger is known as **urban sprawl**). Urbanisation is increasing majorly due to high rates of **migration** from rural areas to urban areas.

### Suburbanisation

**Suburbanisation** is where **urban areas grow** so that **rural settlements** such as villages become **absorbed into the urban areas** and engulfed by the city (becoming a suburban area i.e. an area close enough to the urban area to **commute**).

Suburbanisation usually occurs when **wealthier people** decide to move **away from the central city** into the suburbs in search of **a better quality of life**. The higher demand for this housing causes the **suburban area to grow** to meet demand.



(Source: <https://garsidej.wordpress.com>)



An example of an area going through **suburbanisation** is Stoke Gifford in South Gloucestershire. Located approximately 5 miles away from the city of Bristol, Stoke Gifford has urbanised in correlation with Bristol's **urban sprawl**.

The population has grown by **40%** from 2001-2011, and the area underwent **rapid urbanisation** in the 20<sup>th</sup> century, from a village to a suburban area. Are there any similar examples in your urban area?

**1962**



**2018**



**1975**



**2018**



(Source: [stokegiffordhistory.wordpress.com/](http://stokegiffordhistory.wordpress.com/))

(Source: Google Earth)

When urbanisation takes place, there is a **larger population to accommodate**, meaning the demand for **suburbs** (an area close to an urban area, but with more space, larger houses, more greenery like parks etc.) increases and the **suburban area expands**.

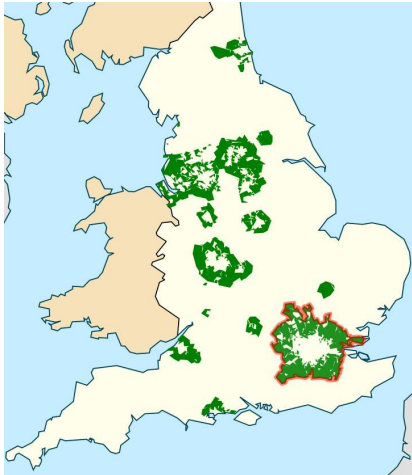
### Issues with Suburbanisation

Suburbanisation's major **disadvantage** is that it can lead to **inner-city areas becoming deprived** and house prices within the suburbs increasing. In order to limit **urban sprawl**, strategies to limit **suburbanisation** can be put in place. An example of this is a **green belt**, which is an area around a city where building is **restricted** in order to preserve **rural areas**.



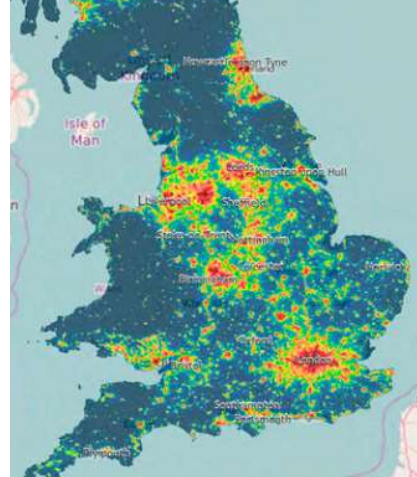
## England's Green Belts

The Metropolitan green belt is outlined in red.  
(Source: [https://en.wikipedia.org/wiki/Metropolitan\\_Green\\_Belt](https://en.wikipedia.org/wiki/Metropolitan_Green_Belt))



## England's Cities

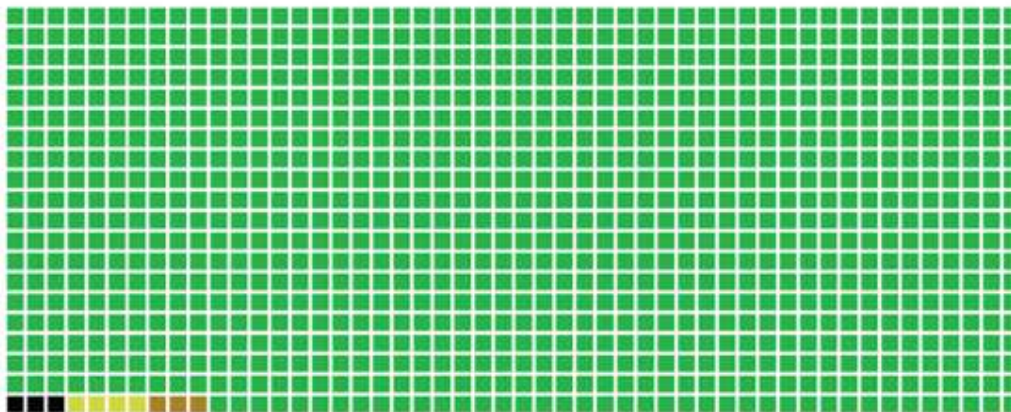
Shown by **light pollution levels**.  
(Source: <https://www.cpre.org.uk/>)





However, green belts are **not always successful**; developers can work to remove green belt status in order to build on the land.

## How has the Green Belt changed?

Change in Green Belt land use between 2013/14 and 2016/17



Green Belt land with no use change   
Land that's lost Green Belt status 

Greenfield Green Belt land built on   
Brownfield Green Belt land built on 

\* Green Belt boundaries can be changed by councils. Green Belt land does not automatically lose its status when built on.

\* Brownfield is land previously developed (e.g. derelict farm buildings); Greenfield land is not previously developed (e.g. farmland and forest).

\* Some Green Belt land built on may have subsequently lost Green Belt status, so there may be some double counting between these categories.

Source: MHCLG, Land use based change tables 2016-17



## Counter-urbanisation

**Counter-urbanisation** is the process of people **moving out of cities** into rural areas. This process occurs as people seek for a **better quality of life** due to **urban quality of life being unsatisfactory**: i.e. overcrowding, pollution, poor quality of built environment and so on.

Modern **technological** and **socio-economic** advancements means there are **less drawbacks living in a rural area** than previously, e.g. transport links allow people to commute, meaning people are not missing out on work by living in a less urban area.

Key Term:	Urbanisation	Counter-Urbanisation
Explanation	The process of how a urban area grows as a process of increasing proportions of people living in urban areas. Urbanisation is the result of urban to rural migration	The opposite of urbanisation and is the process of the proportion of people living in rural areas increasing. It is a result or urban-rural migration
Push Factors	Famine, drought, poor healthcare, isolation	Pollution, large industrial areas, economic decline, overcrowding
Pull Factors	Opportunities, jobs, education, better healthcare, hope	Clean air, more space, countryside, better value housing
Advantages	Population more likely to gain skills and have access to better healthcare, reducing mortality. City develops over time, with more workers for infrastructure projects etc.	Forces inner-city urban areas to regenerate - or face collapse. Helps reduce overcrowding and housing shortages. E.g. commuter towns
Disadvantages	Increase in unplanned housing posing a great risk to the population during natural disasters. Water pollution increases and the poor are likely to be exploited. Large social divide in cities	Higher rural house prices, more traffic and congestion, less public transport use in villages. Conflict between existing elderly population and new residents
Examples	Mumbai	St Ives

**Counter-urbanisation** is **increasing**, but it does not **overtake urbanisation rates**, which is why urbanisation is overall still **increasing**. Between 1971 and 1991 the number of people living in the centre of UK cities **declined**. However, the population living in cities has **doubled since 2001**.

## Urban Resurgence

**Urban resurgence** (also known as re-urbanisation) is the process of people **moving back into the city**, especially after the deterioration of the area.

Urban resurgence usually occurs when schemes (created by councils and governments) are put in place that aim to **improve the quality of life in the city area**. These schemes encourage the city centre to economically grow and **regenerate**.



(Source: <https://www.thetimes.co.uk>)

City centres are the location of **72% of all highly skilled jobs** and are 21% more productive than non-urban areas.

Urban resurgence can cause socioeconomic inequalities, as **gentrification** and **excess wealth** in the newly redeveloped areas mean that the **original population** can struggle to keep up with **higher prices** for housing and living.



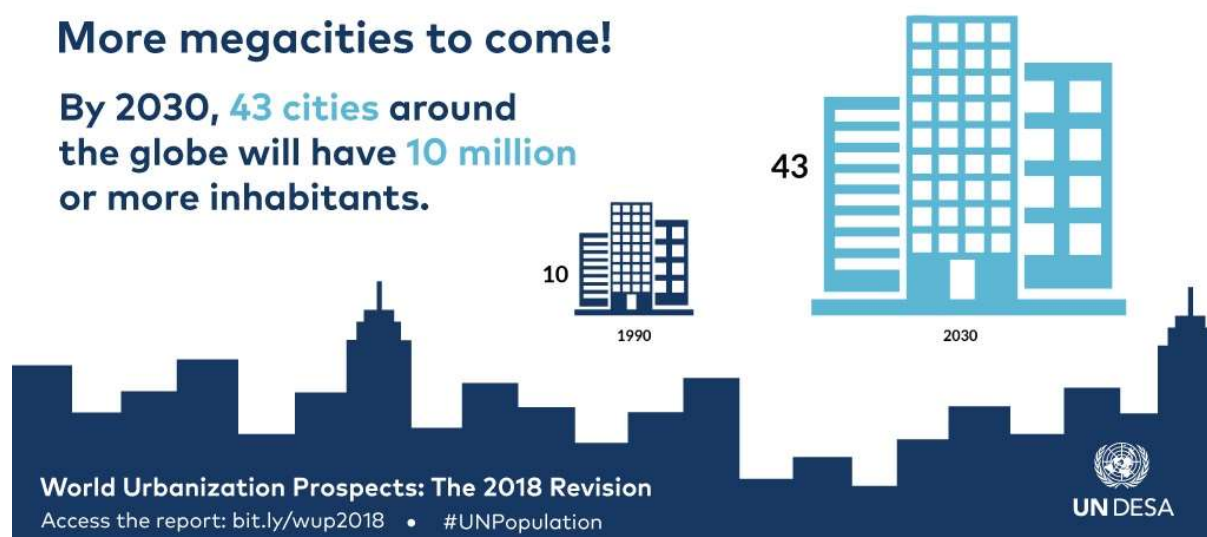
## Megacities

Megacities are **urban areas with a very high population**, specifically a population of **over 10 million people** according to the **United Nations Department of Economic and Social Affairs (UNDESA)**.

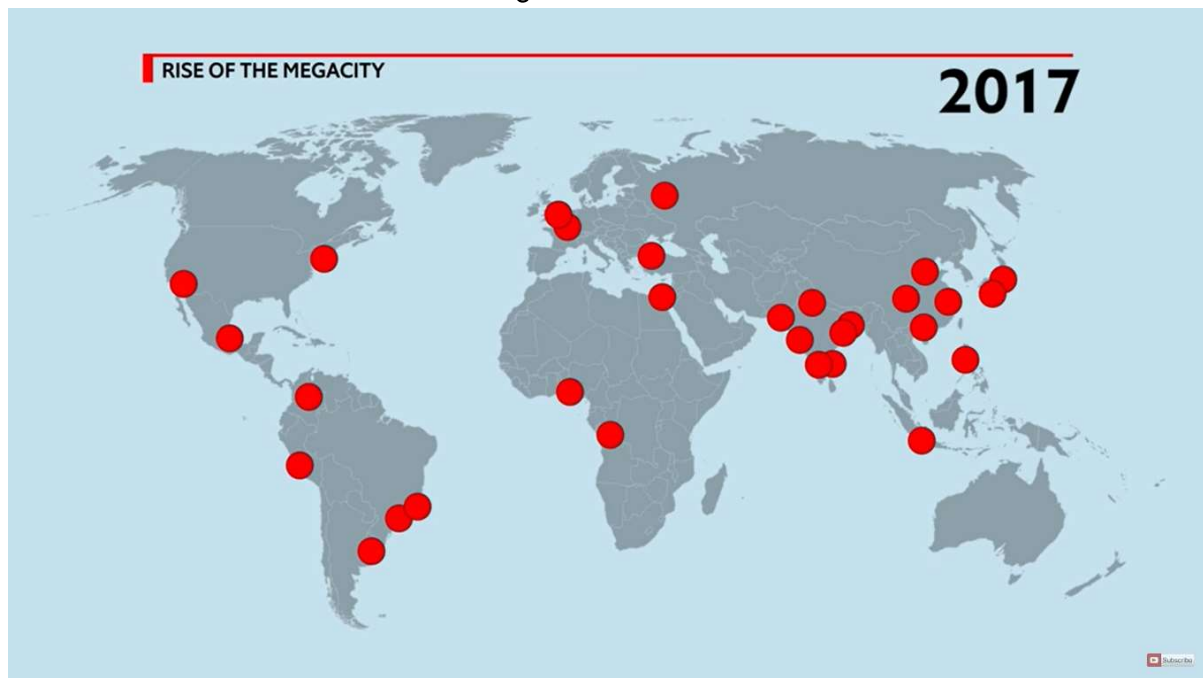
The amount of megacities has been rising since urbanisation began; in the 1950s there were only 2 known megacities - **New York** and **Tokyo**. This number is rising quickly, and as of 2016 there were 31 megacities globally. The number of megacities is projected to increase along with urbanisation, and UNDESA project that **by 2030 there will be 43 megacities**.

### More megacities to come!

**By 2030, 43 cities** around the globe will have **10 million** or more inhabitants.



More than two thirds of all megacities are concentrated within developing nations, and Asia accounts for over half of the world's megacities.



(Source: [www.youtube.com/watch?v=JDS\\_BqDeZ4k](https://www.youtube.com/watch?v=JDS_BqDeZ4k))

Megacities have an integral role in contributing to national and regional economies, as the large workforce allows for **rapid economic growth** compared to the rest of the country. Also, business investments are usually concentrated within megacities, exemplifying growth.





## World Cities

The growth in urbanisation has also led to the emergence of **world cities** globally (world cities are also referred to as **global cities**).

World cities are cities that have **significant political and economic influence** on a **global scale**. Unlike megacities, they are not defined by their **size** or **population**, but by their **importance** to world affairs. Examples of world cities include London, New York, and Tokyo.

These cities usually drive **global economies** and **business**, and are often hubs for banking and finance.

World cities are also characterised for their **rich culture** and **influence over social affairs** within the city and throughout the world. They are also **connected to the rest of the world** via excellent transport links, exemplifying their presence in the globalised world.



**Tokyo** (Source: [www.japantimes.co.jp](http://www.japantimes.co.jp))



**Dubai** (Source: <https://gulfnews.com>)

## Processes Associated with Urbanisation

Urbanisation causes cities to develop and change in different ways:

### Social

- People from **different social and cultural backgrounds** migrate into the city, increasing multiculturalism and making cities more **diverse**.
- Urbanised areas develop into **cultural hubs**, hosting a multitude of **galleries, museums, theatres, shopping centres etc.** increasing quality of life for those living in the city.
- Urbanisation improves access to different **jobs, education, healthcare** services etc. due to larger investments within cities.
- Access to a **wide range of jobs** increases income, positively affecting quality of life.



## Economic

- Urbanisation leads to a **shift in employment** from **primary sector** (e.g. agricultural industry) to **tertiary sector** (e.g. finance industry) jobs. This increase in **higher wage jobs** leads to **economic development** in urban areas.
- The **rural-urban migration** associated with urbanisation brings a **large population to urban areas**. This means more people are **working and contributing to the economy**, thus developing it. Consequently, the economy may **decline** in areas where people have migrated **away from** as there are less people contributing to the economy.
- **Urban growth** leads to the **development of a range of businesses and industries** that drive the economy.
- **Economic inequalities** may arise due to unsustainable urbanisation. Overpopulation and lack of resources can cause many of the population to struggle maintaining a satisfactory quality of life, especially when **the cost of living is higher**. An example of this is the emergence of urban squatter settlements, such as the Brazilian favelas or Dharavi in Mumbai.

## Technological

- **Urban areas** often become **centres for technological advancement**, with many cities developing into technology capitals, such as Silicon Valley.
- New technology is often **introduced into cities first** as there is a **higher demand** for it, e.g. the development of 'Smart Cities'.

## Political

- **Central political institutions** are almost always in the capital, making these urban areas the focus of political activities.
- Political movements are usually more prevalent in cities, for example how Extinction Rebellion often targets areas like London.

## Demographic

- Cities host a lot of cultural diversity, making the demographic more **diverse**.
- The demographic in cities is usually predominantly **young adults**, as many move to urban areas for **education, better social life, and employment opportunities**.
- **Older people** tend to move away from cities into the suburbs in search of a better quality of life, also altering the demographic of urban areas.



## Urban Change

Urban areas are **dynamic**, and many have **experienced changes** due to different processes acting within society. In the past half-century, many urban areas have experienced phenomena such as **deindustrialisation**, the rise of the **service economy**, and **decentralisation**, which have helped shape these environments.

## Deindustrialisation

Deindustrialisation is the decline of industry within a country, usually measured by the **reduction of industry employment**. Deindustrialisation began in the **mid-20th century** in **developed countries**, though in recent decades the process is apparent in **developing countries**.

Deindustrialisation has happened on a mass scale in western society due to the struggle for industries to compete with **cheaper labour and manufacturing costs** in countries such as in China, Singapore and Taiwan).



(source: [www.ft.com](http://www.ft.com))

## Characteristics of deindustrialised places

Economic restructuring on a large scale has ultimately left some people and places behind through **unemployment**. When the major source of employment for a community closes down and there is **insufficient support** to create new suitable employment opportunities by the government, masses of people are left without a source of income which directly **depletes quality of life**. This has caused increasing levels of **social deprivation**, worsening health, education, crime, access to services and the living environment. This is the case both in deindustrialised **urban** areas and **rural** settlements which were once dominated by primary and secondary economic activity such as **agriculture** and **manufacturing**.

This pattern of deindustrialisation was seen across many places in the UK in the **1980s** and **1990s**, particularly in the North and in Wales. Deindustrialised cities such as Blackburn and Stoke are categorised as 'low wage, high welfare cities', with places like Cardiff classed as 'low wage, low welfare.' The best achieving cities, such as London, Cambridge and Reading are classed as 'high wage, low welfare.' Cities with the highest percentage of low earners tend to be **19th century industrial** regions, whereas the high-earning cities are associated with employment **diversity** relating to the growth of tertiary and quaternary sectors.



## Rise of the Service Economy

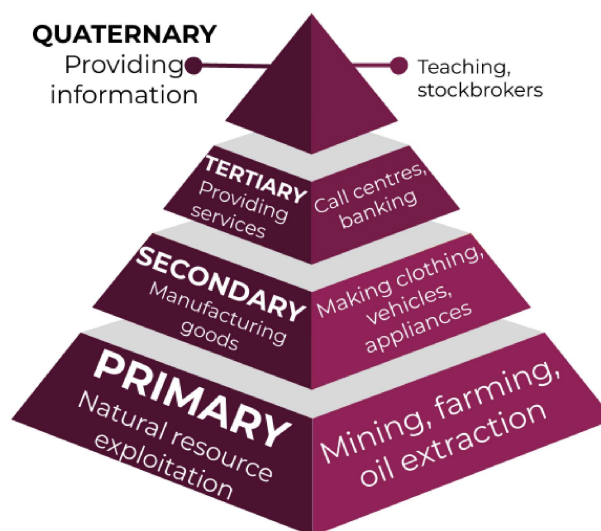
A service economy is an economy where the **dominant source of economic growth** is through providing services, rather than goods.

### Drivers of the tertiary sector expansion

- **Rising affluence** - services have grown to support the rising **disposable incomes** of individuals who have increased inclination to spend this on the service sector through leisure, entertainment and tourism.
- **Technological change** - technology has enabled industries to expand and relocate without the **barriers of geographical proximity** through transport and communication. **Transport** has expanded the extent of **labour pools** so skilled workers from further distances can have tertiary employment. Changing transport technologies have enabled retailing, offices and leisure industries to **disperse** beyond the city centre, across urban areas. Changing **communications** alter the distribution of the service economy, with **online** booking replacing travel agencies and hotels and conference centres becoming key functions for business life and tourism in most major cities.

Originally, the service sector grew to **support the manufacturing sector**. The **primary and secondary industries** needed the supporting commercial, financial and legal services to allow their **businesses to grow** successfully. Since then it has been the forefront of economic restructuring and is the **dominating sector** in the developed world (largely **concentrated** in urban areas). The rise of the service-based economy has been accompanied by the growth of professional, managerial, technical and creative employment of **highly educated** and **highly paid** persons.

### Different Sectors of Industry



### Decentralisation

Decentralisation is the process of **urban developments away from the city centre**, such as large shopping centres or retail parks. Developments are **cheaper away from the city**, as land prices are usually cheaper than within the central business district. **Decentralisation** can cause issues as this drives customers **away from the city centre**, meaning there can be issues with **city centre degradation**.

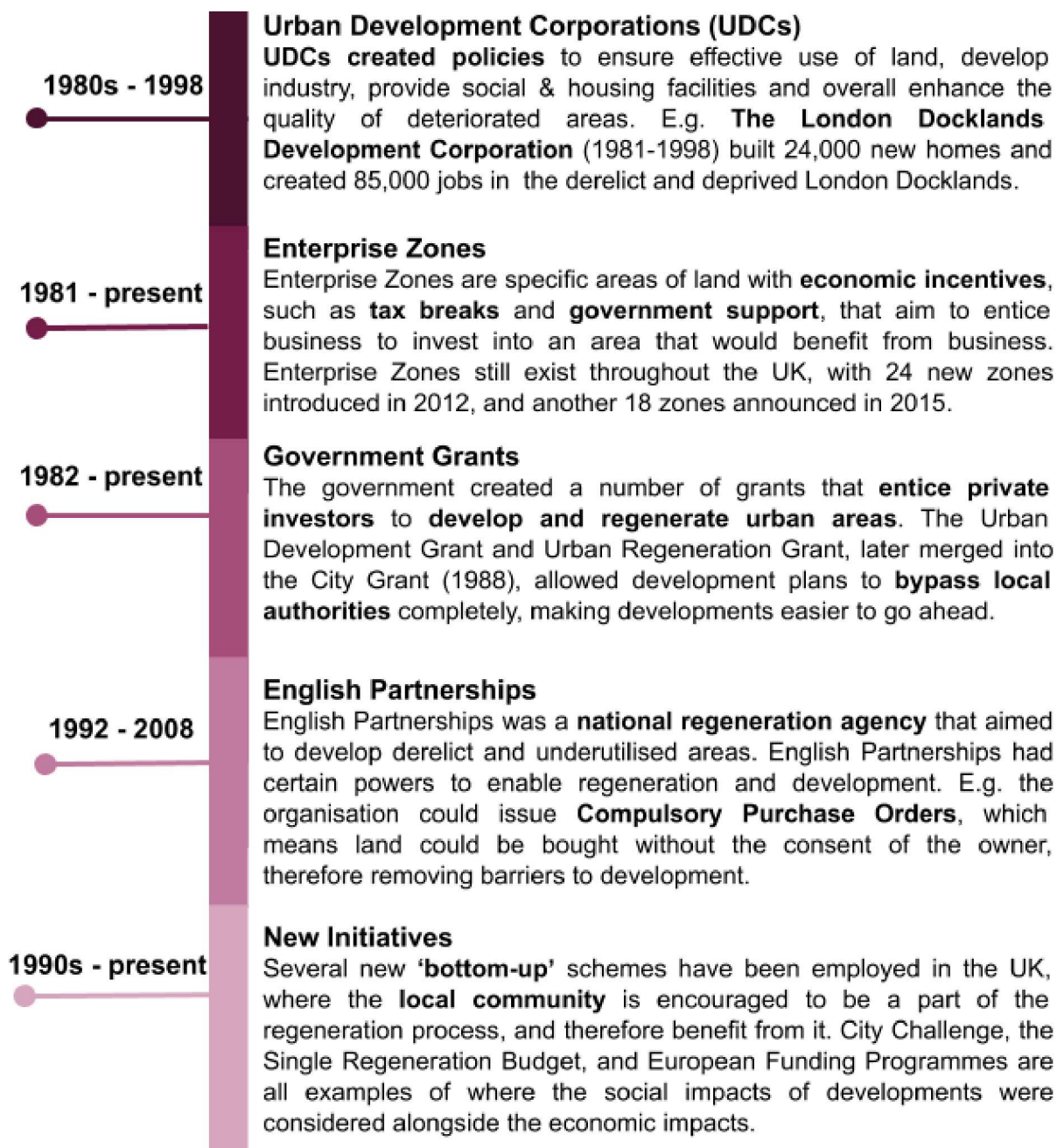
In recent years there has been the announcement of **closures** of many common staple high street stores such as Marks and Spencer, New Look and House of Fraser. The financial failure of retailers impacts city centres, with **closed frontage altering the image** of the high street. Their replacement may not return the street to its former image, causing the **attractiveness** of the street to fall further and the loss of retail impacts **jobs**.

For example, the Metrocentre in Gateshead is a large shopping centre located a few miles from Newcastle's city centre. The Metrocentre has reduced city centre shopping.



## Urban Regeneration in Britain

Following the socioeconomic and environmental effects of deindustrialisation and decentralisation, **urban regeneration** has become a priority for the British government. Since 1979, **urban regeneration policies** have been implemented nationwide to improve the conditions of cities.



## Urban Forms

A city's **urban form** refers to the physical characteristics of a city, such as its layout, size, and land-use.

The majority of urban areas are established in areas with **favourable resources**, such as access to water, food, fertile land and security. However, as society progressed, so did the form of urban areas. Urban forms **change over time** in **different ways** based on the **physical factors** of the area and **human influence**.

### Physical Factors

- **Natural resources:** Areas rich in **natural resources** can encourage **development** in cities as resources can **support the population** and the **economy**. E.g. local access to **building materials** can support the construction of new buildings. **Coal and oil** can be used for **fuel** or can be **sold**, which promotes development and growth within the city.
- **Water:** Plentiful supplies of water are necessary for agriculture, sanitation, and health. Urban populations with poor water supplies will have to **adapt their land-use** to conserve or optimise water supplies, e.g. by building desalination plants (common in urban areas located in arid environments like Abu Dhabi). Water also acts as a **physical barrier to growth**, as it blocks **urban sprawl**, e.g. on a coastline.
- **Topography:** Areas with a flat topography are easier to build on, meaning **construction** can be more spaced out. Urban sprawl is difficult on **slopes**, especially at steeper, rougher areas, meaning building can be very **densely compacted** into one area that is suitable for building (e.g. the favelas in Rio).
- **Climate and Land-type:** Unstable soils, permafrost, or waterlogged ground surfaces can be **difficult and expensive** to build on, therefore limiting urban growth. Urban form is influenced in several ways, e.g. having to construct buildings on **stilts** in permafrost areas as the ground is impenetrable.

### Human Factors

- **Wealth and development:** In richer countries, urban developments are usually **structurally safe** due to **building regulations**, and social/environmental effects are considered. In developing countries, urban growth can be **rapid** and urban sprawl can sometimes be **unmanageable**. Urban growth is severely limited by lack of **wealth**.
- **Planning:** Planned developments are considerate of **space, safety, and well-being**. E.g., open/green spaces are often incorporated into urban areas to make the area more visually appealing and nicer to be in. **Unplanned developments** can be **unsafe** and potentially overcrowded.
- **Patterns of growth:** Higher value land is usually in the **central business district (CBD)**, and land decreases in value away from it. **Wealthier businesses** occupy the CBD, whereas less wealthy businesses are located **further away**. Business parks and large shopping centres can be located away from the CBD as it is **cheaper**.
- **Economic activities:** Land-use is affected by the **economic activities** of an urban area, e.g. ports may be built for trade.
- **Past developments:** The original structure of a city may change how a city develops, such as limiting construction to protect **listed or important buildings**, or poor transport links as older **roads** may not be wide enough for parked cars and **two-way traffic**.



## New Urban Landscapes

**Land-use** in many cities has developed and changed in recent decades to enhance the **social**, **environmental**, and **economic** aspects of city life. In **more developed countries especially**, planning and investments have allowed the emergence of **new urban landscapes**, for example:

### Mixed-use developments

In older developments within city centres, **residential**, **commercial** and **industrial** areas were separated into **districts**, rather than **mixed** in one area. This means people have to travel **across cities** if they have multiple needs, e.g. leaving work for **lunch breaks**, commuting to/from work, eating out at a restaurant or going to a bar after shopping etc.

With **mixed-use developments**, different buildings with different uses are all in a **close proximity**, meaning people do not have to **travel around a city** if they want to visit different places.

### Edge Cities

An area of business, shops and entertainment services on the outskirts of a city, usually by major transport links. Edge cities develop due to **cheaper land** being available outside of the typical central business district.

### Cultural and Heritage Quarters

Cultural/heritage quarters are large areas within an urban area that are recognised as having particular **cultural importance**, such as areas with cultural infrastructure or the presence of **historically important sites**. These areas can function as a leisure space, as well as an attraction for tourists.

### Fortress developments

Fortress developments, such as **gated communities**, are where areas are secured off from public access, and only certain people with **permission** are allowed to enter. There may be CCTV, security guards, and physical barriers like large gates to ensure people do not have access to these areas. Fortress developments are used in urban areas to provide a **safe space** for people.

## The Post-Modern Western City

The concept of the post-modern western city is the idea that contemporary cities are changing their **industries**, **architectural style**, and **land use** in order to keep up with **socioeconomic changes** in society. The term 'western' is used as it is mainly western cities (in wealthier, high income countries) that are following this movement.

- Characterised by **unusual architecture** with strange styles, shapes and symbolism (e.g. the Gherkin in London). Emphasis on aesthetics.
- **Tertiary and quaternary** industries are the main sectors of the economy.
- **Fragmented urban forms** rather than things being concentrated in one area.
- A large amount of **socioeconomic inequality** exists, although more diverse.



## Gentrification

**Gentrification** is the process of **housing improvement** on a **piecemeal** basis associated with low income groups being **displaced** and more **affluent** people moving in.

Gentrification is the consequence of economic and social change in central urban places. Wealthier individuals buy and **renovate** properties in more **run-down** areas, often in the inner city.

### Reasons for gentrification:

- **The rent gap** - the **price** of a property has fallen below its **real value** due to a **lack of maintenance** and investment. Those who can afford this renovation make a profit from this.
- A changing **household composition** and demographic- young singles/couples see the **benefits of inner city living** and may be suited to the smaller, cheaper residences available.
- It is desirable to live in the inner city due to the proximity to employment opportunities **reducing commuting costs** and the accessibility to **central entertainment** and the diverse cultural opportunities of an urban centre.
- Sometimes these inner-city areas have a **reputation** of being the new 'hipster' neighbourhood with a **vibrant arts scene** and cultural and creative opportunities and freedom.
- They may be **encouraged locally** by the **council** and local decision makers who can see the benefits of improving the status, class and physical environment of an inner-city area.

### The process of gentrification:

1. Lower-middle class incomes, including the creative class, migrate into cheap, outdated, **run-down inner city** places.
2. The pioneers **renovate** their homes, improving the environment.
3. The place gains a **fashionable** status, attracting more young professionals.
4. **Private sector** investors buy and renovate more of the housing.
5. Local government invests in the place as a '**growth pole**'.
6. **Wealthy** migrants and foreign investors move in.
7. House prices increase far beyond the average salary. Local people, especially lower income groups, are **priced out** of the housing market.

Benefits of gentrification	Costs of gentrification
<ul style="list-style-type: none"> <li>• Rise in the general level of <b>prosperity</b> and increasing number and range of services and businesses</li> <li>• Increased <b>tax</b> revenue for local authority</li> <li>• Improved physical <b>environment</b></li> </ul>	<ul style="list-style-type: none"> <li>• Low income groups, often those residing in this place previously, get <b>priced out</b> of the housing market</li> <li>• A threat to the <b>community</b></li> <li>• <b>Tension</b> between new and old residents</li> <li>• Losses to lower order <b>local services</b></li> </ul>





## Characteristics and Patterns in Contrasting Urban Areas

**High income countries** and **low income countries** have different **urban characteristics** due to **the different ways in which they develop** and the **different factors influencing development**.

### Land-use patterns



There are some **similarities** in land-use between developed and developing urban areas, but also **many differences** caused by the **speed of urbanisation, wealth, and regulations**.

The majority of urban areas regardless of their levels of development have a **central business district (CBD)**. This is where **commercial, financial, and business activities are concentrated**. The CBD is usually the oldest part of the city, although new builds do often occur in the CBD. The age of buildings usually decreases **increasing distance from the city centre**, with the newest developments on the **edge of urban areas**.

Land-use in the **inner-city** differs between **high income countries** and **low income countries**. In LICs, high-cost residential areas are usually located within the inner city, such as luxury apartments and higher-class estates. In HICs, the high land price means developments are **densely compacted**, such as high rise flats, where rent is often cheaper, but quality of life is poorer. The inner-city is also where **industrial sites** are usually located, which are often near major transport links also (e.g. motorways).



Surrounding the inner city, sub-urban areas that are higher in value tend to reside in HICs. Effective planning means these areas often have **large open spaces**, and houses are usually **larger** and **more expensive**, especially within **commuting distance to the city**.

In LICs, areas on the **edges of cities** tend to have very **poor quality housing** that have been constructed with little or **no regulations**, such as **slums**. Houses closer to the city, may have been **improved over time**, making them sturdier and safer to live in. However, the **newest slums** often lack access to any **basic amenities** such as water and electricity, and can be **unsafe to live in**. A mixture of **rapid urbanisation** and **poverty** usually causes slums to arise, as there are **too many people migrating** to the city in comparison to how many **affordable homes** there are, causing extreme urban poverty.



**Santa Marta, a favela (area of informal housing) in Rio.**

(Source: [www.smithsonianmag.com/innovation/mapping-rios-favelas-180959816/](http://www.smithsonianmag.com/innovation/mapping-rios-favelas-180959816/))



## Economic Inequality



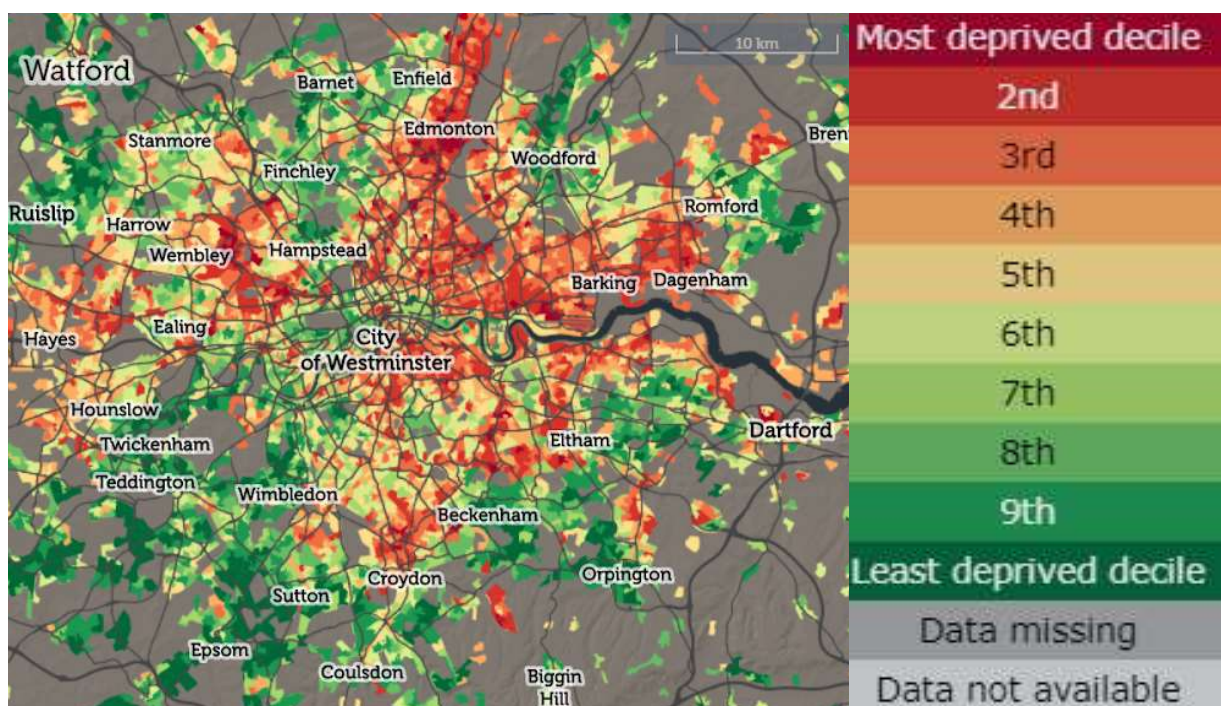
Economic groups are usually **spatially distributed within an urban area**. **Economic inequality** is present in different ways in contrasting urban areas, and can cause multiple problems.

As previously mentioned, in HICs, **expensive, larger** housing is located in the suburban area surrounding the city. This land-use pattern mirrors **economic patterns**; wealthier, less deprived populations usually live on the outskirts of the city in sub-urban areas, where the quality of life can be better than in cities. Affluence can be concentrated within the **centre of HIC cities** also, and house prices can be **very high** in these areas as land is so expensive.

There is a great deal of **poverty** within cities in developed countries, causing issues such as **deprivation** and **homelessness**. Rent is usually cheaper in the inner city than other areas of the city, but quality of life can be poor. High **population densities** and strained **public services**, low access to **green spaces**, and high **crime** and **unemployment** can be common within deprived areas such as residential tower blocks. With a high cost of living that usually comes with living in a city, many can struggle to cope, highlighting the **economic inequality** that exists within cities.

Post-industrialised cities also face **deprivation** and **unemployment** due to insufficient economic restructuring after industries closed down.

These trends can be seen in the map below, which shows a ranking of **deprivation** within London. Notice how in the centre and outskirts, there is less deprivation than in the inner city.



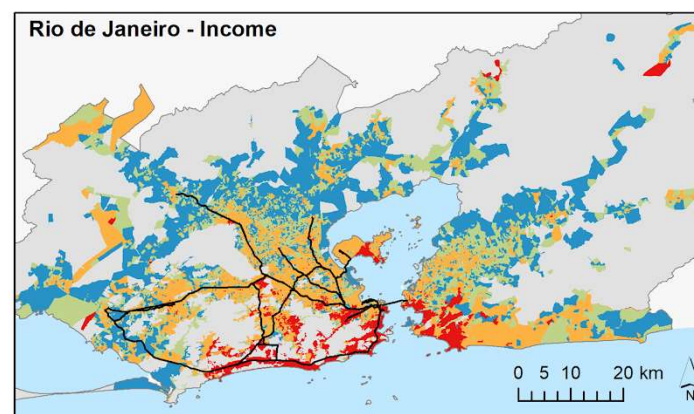
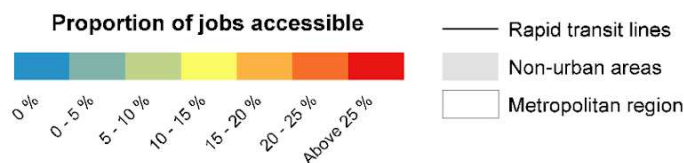
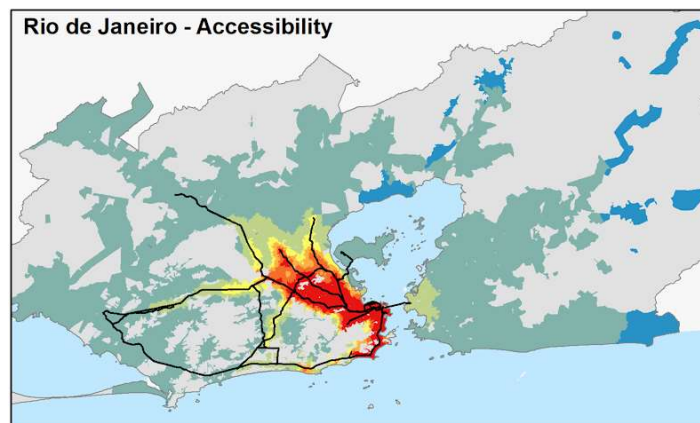
(Source: <https://maps.cdrc.ac.uk/>)



In lower income countries, economic inequality is usually **much more severe**, and it also follows **different spatial patterns**. This can be seen in Rio de Janeiro. The **wealthiest people live near the centre** along the coast (>3 MW = more than 3x the minimum wage), and the **poorest people live furthest away** from the city (<½ MW = less than half the minimum wage).

Many developing countries do not have the **wealth** or **resources** to support poorer populations like developed countries do. This can lead to **very severe poverty** in cities, like the development of 'slums' and informal dwellings. Many social issues can arise from this economic inequality, such as **the emergence of gangs** due to a lack of policing. **The Red Commando** is a gang associated with drug trafficking in Brazil. In some favelas, they operate without any police intervention.

**Accessibility** can be severely limited by **poor transport links**; if people cannot **travel** to find work, their income is limited by the smaller opportunities available. Studies have shown a very direct link between **accessibility and income**.



(Source: <https://www.sciencedirect.com/science/article/pii/S0966692318304332>)



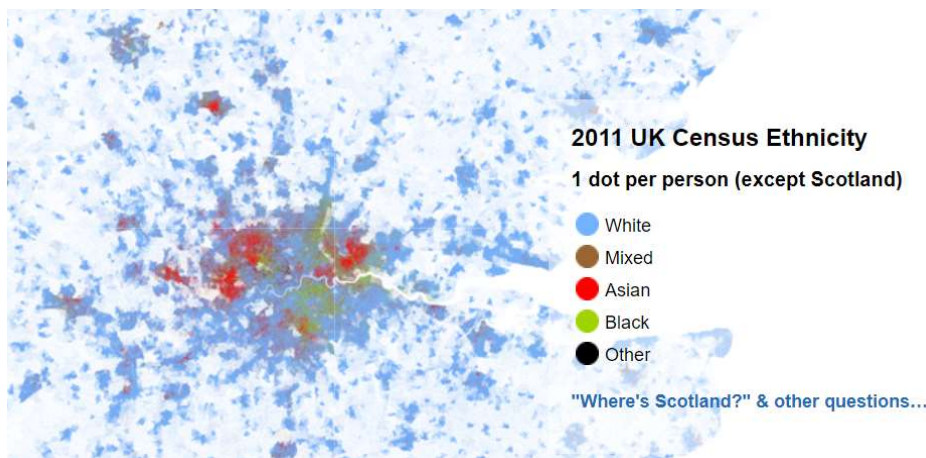
## Cultural Diversity & Social Segregation



**International migration** is a major driver in creating rich cultural diversity within cities. People migrate to cities seeking **better work opportunities**, **services**, and **quality of life**. Cultural diversity brings **many positives to a city**, such as increasing tolerance, allowing people to celebrate different cultures, and bringing tourism. However, it can also create issues, for example:

- People may not be **tolerant** towards different cultures, and some may experience prejudice behaviour or racism.
- Some cultures may feel **under-represented** within their area, and may not have access to **important aspects of their culture**, such as **food shops, places of worship** etc.
- There may not be **resources** available to improve quality of life for those with different cultures, such as providing information in **multiple languages** so that everyone can understand it.

**Social segregation** is where groups of people **live apart** from one another or from the larger population due to factors such as **wealth, ethnicity, religion or age**. Spatial segregation has occurred in many urban areas, often causing ethnic groups to be segregated and to live without **social cohesion**. Furthermore, '**gated communities**' also exist within urban areas, where (usually wealthier people) live in a secured, fenced-off community that only allows residents in, which also contributes to social segregation.



(Source: <http://projects.andrewwhitby.com/uk-ethnicity-map/>)

Social segregation can lead to many issues within urban areas:

- Areas can be under attack from **prejudice and racism**; certain areas can be stereotyped in derogatory ways based on who lives in that area
- People may feel **isolated** if they are not within the **demographic** of the majority who lives in that area
- Low paid migrant jobs, historically and currently, means migrants are limited with housing options and have to live in **cheaper, more deprived areas**. These areas are often **neglected by the government**, leading to high levels of crime, unemployment, and other social issues. This can exemplify the racial inequalities within society, as these socially segregated groups lack the **resources** that other people may have if they were to live in a less deprived area.



## Strategies to Manage Urban Issues

Economic and social issues can be managed through **government** and **community** intervention. Approaches may differ between contrasting urban areas, especially between **low income countries** and **high income countries**.

- **City minimum wages** - in some cities such as London or New York City, the minimum wage is **higher** than in the **rest of the country** because the **cost of living** is very high in comparison to the rest of the country. Higher minimum wages work to **reduce economic inequality**, as people have more money for **food, rent, and utilities**. However, some countries do not have a **minimum wage** (40%+ of developing countries), and in others, the informal economy makes it difficult to **regulate** minimum wages.
- **Fair rent and housing policies** - Legislation can be put in place in cities to ensure people have access to **safe and affordable homes**, reducing the economic inequality existing within cities. There are laws in place to ensure that people pay a **fair price** for their rent, and city councils are constantly battling the demand for more homes.

For example, the Mayor of London pledged that he will “**ensure an average of at least 17,000 more affordable homes per year in London [...] 60% of the affordable housing provision should be for social and affordable rent and 40% for intermediate rent or sale**”. Social housing (e.g. owned by the council) is one way to ensure that more people have access to homes.

- **Recognising informal housing issues** - In **developing countries especially**, informal housing can exacerbate severe inequalities. In some countries, residents of squatter settlements are **evicted**, and their homes **demolished** as a way to limit the growth of informal residential areas. In order to **limit inequality and social issues**, these settlements can be **recognised by law** as actual residential areas, and therefore provide the tools and resources to make them **safe for people to live in**. This ensures access to **clean water, sanitation, transport and other essential needs** for all.
- **Encouraging multiculturalism** - Festivals such as Notting Hill Carnival can **encourage social cohesion** and allow people to celebrate different cultures.



(Source: <https://www.visitlondon.com/things-to-do/event/9023471-notting-hill-carnival>)



## Urban Policies and Regeneration

- **Retraining** - a population with a **skills base** aligned to the needs of the primary/secondary industry needs to retrain to have the skills necessary to be successful in the **new services economy** (tertiary industry). This is a large undertaking when a large proportion of the population was brought up destined for a life of farming/mining etc, and now these opportunities are gone. However **diversifying skills** are essential for reducing the negative impacts of deindustrialisation by boosting employment opportunities.
- **Economic policies** - at a local level, governments can positively promote a place to carry out economic activity through favourable policies with regards to taxes etc. This is **boosterism**. At an international level, **FDI** can be used to revitalise a deindustrialised place, through stimulating tertiary growth and investment by foreign MNCs.
- **Environmental policies** - the government can set environmental **standards** that closing industries must abide by so to not leave unsightly derelict land strewn with toxic waste.

## The Role of Government Policies

- By investing in **infrastructure**, such as high speed rails and airport developments, governments can maintain growth and improve **accessibility** to regenerate regions. It is often the role of national governments to facilitate **regeneration** projects in partnership with charities and developers.
- Government policies control the **rate** and **type** of **developments** allowed through planning laws, creating house building targets, considering housing affordability and gaining permissions. This affects economic regeneration of both rural and urban regions. Government actions may prioritise **national over local** needs and opinions which can delay regeneration projects and thus **worsen inequalities**.
- Government decisions about **international migration** and the **deregulation** of capital markets (e.g. allowing foreign investment in London real estate) significantly impact growth and direct/indirect investment. This can be done by the government, for instance, creating open door migration policies.
- Local governments compete to create **business environments** with designated areas for development to attract domestic and foreign **investors**. It is the actions of these local authorities that will determine the success of the regeneration projects.
- **Local interest groups** are vital in design-making and creating regeneration projects. However, there is often **conflict** between these groups as interests differ, some may wish to preserve urban landscapes whilst others seek to change it.



The **European Social Fund (ESF)** - this aims to tackle **poverty** and **social exclusion** by increasing employment and helping people to **access sustainable employment**, as well as investing in skills and improving the **diversity** of the workforce and investing young people with the skills required for the quaternary industry. To be successful it aims to reduce **poverty**, **increase skill levels** of the workforce and reduce the number of people with no or basic skills. It also wants to increase **youth** employment and attainment, whilst **reducing inequalities** in the labour market among women and other disadvantaged groups.

### Re-urbanisation

**Re-urbanisation** is the large-scale, **government-backed** movement of people **into the city centre** as part of regeneration.

In the 21<sup>st</sup> century, there has been an expansion in the population of some central areas, alongside the development of **24-hour consumption of services** provided. Between 1971 and 1991 the number of people living in the centre of UK cities **declined**. However, the population living in cities has **doubled since 2001**. Central areas of cities are being **reclaimed for residential** uses and the services and service employment opportunities they provide are making them more attractive places to **live and work**. City centres are the location of 72% of all highly skilled jobs and are 21% more productive than non-urban areas.

### Trends in re-urbanisation

- There has been an increase in the construction of **centrally located residential areas**, composed of more flats and apartments which generally attracts a **new demographic** around the 'young professional'. Some of these have been the result of **relaxed development rights** which permit the conversion of commercial buildings and old industrial buildings to housing.
- There has been an increase in **studentification** with the expansion of city centre student accommodation and the rise of centrally-located new universities.
- Generally **rapid population increase** has driven re-urbanisation.
- The growth of **24-hour culture** and **central entertainment** districts has increased the attraction of the CBD.
- The growing effectiveness of **public transport** networks has made city centre living more viable.

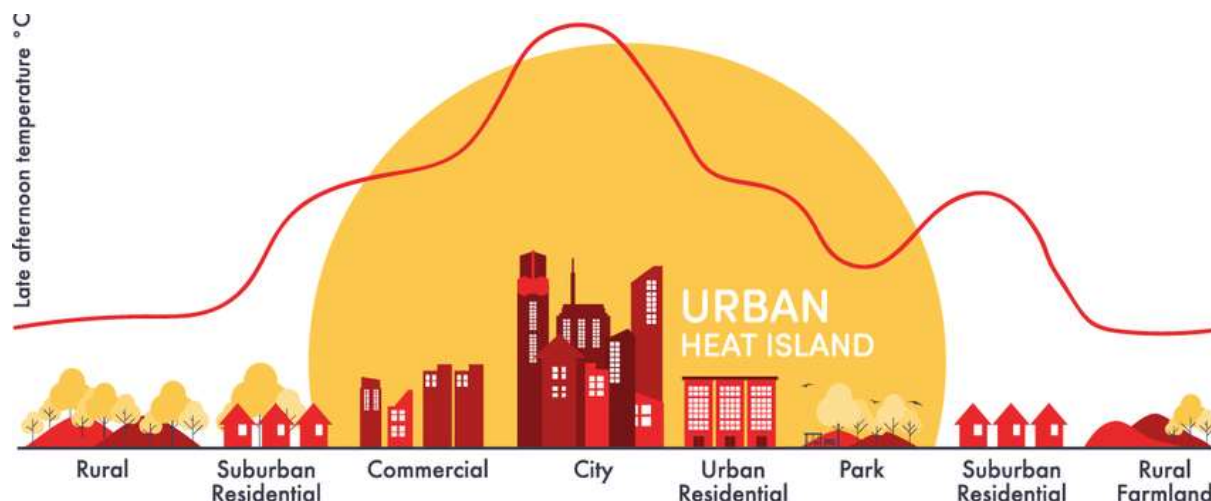


## Urban Climate

The characteristics of urban areas influence their climate, such as **temperature**, **precipitation**, and other weather events.

### The Urban Heat Island Effect

The **Urban Heat Island Effect** is a phenomenon where the **characteristics of urban areas** and the activity within them cause the areas to **produce** and **retain** more heat than surrounding areas. Urban Heat Islands are particularly noticeable at **night** when the urban areas do not lose heat as quickly as surrounding rural areas.



(Source: [Fuladlu, Kamyar & Riza, Müge & Ilkan, Mustafa. \(2018\).](#))

Urban Heat Islands develop due to different reasons:

1. Wasted heat from **urban activities**: urban areas host many activities that release heat, such as traffic, factories, homes and businesses, people and other activities. This wasted heat causes the average temperature in urban areas to be higher than surrounding areas.
2. Urban **materials**: urban surfaces and buildings **absorb and store more solar energy** (lower **albedo**) than other surfaces, such as grass. Tarmac, concrete and brick surfaces emit absorbed heat as **long wave radiation**, warming the surroundings (especially at night) which keeps average temperatures higher in urban areas.
3. Lack of **evapotranspiration**: heat energy is lost through evapotranspiration. Urban areas tend to have less vegetation, meaning less heat energy is lost via **transpiration**. Also, urban drainage systems reduce the amount of **surface water** in urban areas as rain is quickly transported elsewhere via drains etc., meaning there is less energy lost in evaporation. With reduced evapotranspiration, heat energy is stored within **urban areas**, keeping temperatures higher.





## Weather in Urban Areas

The characteristics of urban areas **influence precipitation patterns**. Rainfall is seen to **increase** over urban areas in comparison to surrounding rural areas, and **intense rainfall** events (e.g. thunderstorms) are more frequent in urban areas. This pattern is thought to be due to several reasons:

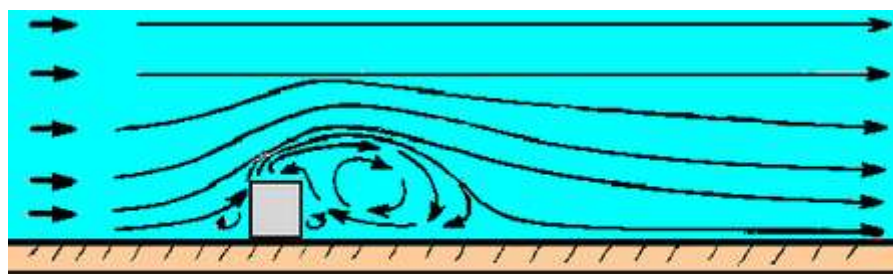
- Atmospheric instability caused by the **urban heat island effect** - warm, moist air rises above urban areas, then cools and condenses as rain. This causes cloud cover to be greater in cities.
- Altering wind patterns - airflow is obstructed by **tall buildings**, which reduces the ability for moist air to disperse.
- Aerosols and particulates - Particles in the air can cause water vapour to **condense** and form clouds. This also contributes to heightened cloud cover in cities, as well as higher incidences of **fog**.

As urban areas are **warmer**, incidences of **snow, frost and hail** are less frequent than in rural areas.

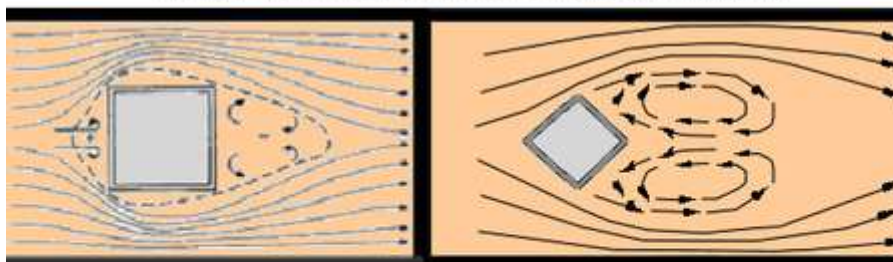
## Wind

Wind patterns are **greatly altered** in urban areas due to **large buildings in urban areas**.

In general, wind speed is **lowered** in urban areas due to the presence of **many tall buildings** which cause friction and act as a barrier to wind. However, **turbulence** can occur around buildings due to **frictional drag**, forcing air to be deflected and swirl like a vortex.



Flow Pattern: Side View Wind Against Face



Flow Pattern: Top View  
Wind Against Face

Flow Pattern: Top View  
Wind Against Edge

(Source: [www.islandnet.com/~see/weather/elements/citywind.htm](http://www.islandnet.com/~see/weather/elements/citywind.htm))



## Air Quality

Air quality is significantly poorer in urban areas due to **urban activities** creating **particulates** that stay suspended in the air. These particles come from different sources:

- **Vehicle exhausts** produce pollution such as carbon dioxide, carbon monoxide, nitrous oxides, volatile organic compounds and particulate matter.
- Industrial activities such as **coal burning factories** produce many particulates. Power plants are large contributors of sulfur dioxide, which produces acid rain.
- Construction work is more prevalent in cities. This can agitate **coarse particulates** such as fragments of cement or brick that can then become suspended in the air.

## Photochemical smog

Photochemical smog is a particular type of air pollution caused when particulates react with **UV light** from the sun. Nitrous oxides and volatile organic carbons react with the sunlight to form **harmful secondary pollutants** such as **ozone** and peroxyacyl nitrates (PANs). Photochemical smog is more prevalent in **sunnier countries** with more UV light to fuel the reactions.

Photochemical smog stays at ground level due to a **temperature inversion**. Cool air is trapped below warmer air (the warm air acts as a lid) and causes the air to remain still and therefore the smog is trapped.

Photochemical smog is known to cause many respiratory disorders, such as asthma, as well as other illnesses.

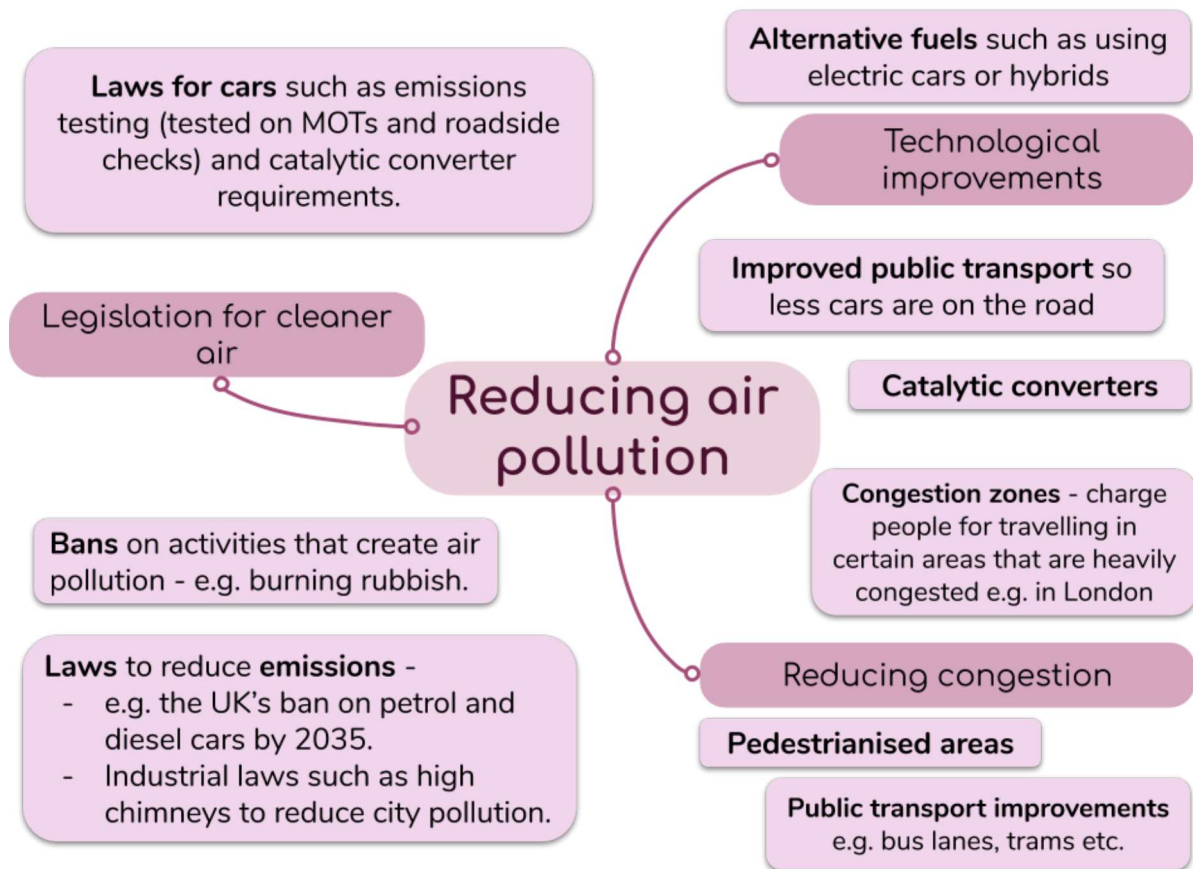


(Source: <https://www.popsci.com/smog-cloud-seeding-thailand/>)



## Policies to Reduce Air Pollution

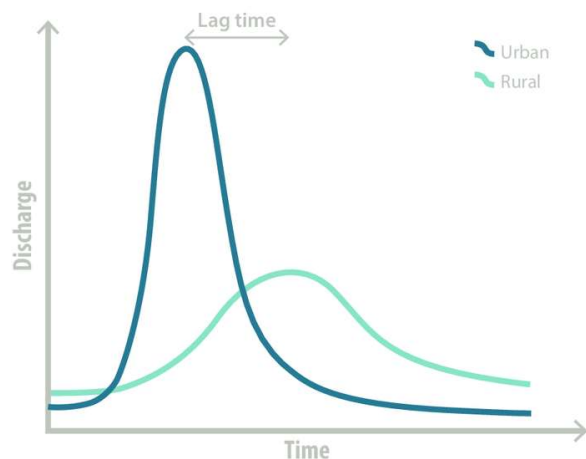
Due to the adverse health and environmental effects of air pollution, cities have worked to reduce air pollution through different strategies.



## Urban Drainage

Urban areas have **different patterns of drainage** in comparison to rural areas.

- Due to the **impermeable surfaces** in an urban area (pavements, tarmac, buildings etc.) water cannot **infiltrate** into groundwater stores, meaning it can only flow as surface **runoff**.
- **Drainage structures** have been built in urban areas to **direct the water elsewhere**, such as rainwater downpipes and manmade watercourses on the side of roads to channel water into drains (a road camber).
- During high intensity rainfall, water is quickly transported into **rivers** in urban areas as the majority of water cannot be **stored** within the urban drainage basin, and instead flows **directly into the river**.
- This causes floods to have a short lag time and a high peak discharge.



## Catchment Management in Urban Areas

Urban river catchments can be managed in order to **reduce issues associated with the urban water cycle** (flooding, riverbank erosion, contamination of groundwater, water shortages, water pollution etc.). However, many strategies may create **issues** if they are not properly implemented.

- **Dredging:** dredging is where sediments are **removed from the river channel** with machinery. It is used as a way of **reducing flooding** as it deepens the river channel so more water can flow into it.

However, dredging can cause **water to flow more turbulently**, and can increase the speed of water flow. This can enhance the risk of flooding further downstream.

- **Dams and reservoirs:** Dams can be used to manipulate water flows and stores to reduce flooding, and reservoirs can be used as a water supply.

Dam construction can cause a great deal of environmental damage e.g. large valleys can be flooded to make reservoirs, dams change how sediment is transported which can affect erosion etc. Settlements may also need to be **displaced** in order to make room for dams and reservoirs.

- **Flood defenses and water channel management:** Physically altering water courses through straightening channels, constructing flood walls, and creating drainage pipe systems can be an effective way to force water out of urban areas.

These strategies may also worsen flooding downstream, as well as being expensive and **environmentally degrading**.



**Dredging in the Hudson River.** Source: EPA.

## Sustainable Urban Drainage Systems (SUDS)

Sustainable urban drainage systems are systems that are designed to manage the flow of urban water sustainably. Rather than using **construction** and **environmentally unsustainable techniques**, SUDS use techniques that recreate **natural drainage systems**. This means water is allowed to flow gradually through the system before being removed, rather than removed as quickly as possible (which increases the risk of flooding).



### Examples of SUDS include:

- Introducing **permeable surfaces**, such as grass verges
- Green roofs (vegetation on roofs of buildings) which increases transpiration
- Rainwater harvesting
- Ponds
- Swales (linear depressions, usually covered in grass, which slowly transport water away)

### Urban Waste

Waste in urban areas needs to be **managed effectively** as **large amounts of waste** are created in a **relatively small area**. Sources of waste in urban areas include:

- **Industrial** - waste produced from construction, factories, power production, or manufacturing, e.g. metals, gases, chemicals, excess building material.
- **Commercial** - waste produced by businesses like restaurants or shops, e.g. paper, plastics, food, packaging.
- **Personal** - waste produced by humans in their homes - e.g. food waste, food packaging, discarded electronics/homeware.

Waste can be managed in different ways:

<b>Unregulated</b>
I.e. dumping/fly tipping - waste is illegally dumped in places that are not <b>designated areas for waste disposal</b> . Unregulated waste dumping can be <b>significantly harmful to ecosystems</b> (disrupting wildlife, introducing toxic chemicals into habitats, leaving non-biodegradable materials in ecosystems etc.)
<b>Recycling</b>
Reprocessing materials that can be used again, such as metals, cardboard, glass, and some plastics. Recycling reduces the need to <b>produce more materials</b> as well as reducing <b>waste going to landfill</b> , making it environmentally sustainable.
<b>Incineration</b>
Burning waste rather than storing it. Incineration does reduce the amount of waste going to landfill, however burning requires fuel, and produces <b>gases</b> such as <b>greenhouse gases</b> as well as <b>toxic gases</b> , which are detrimental to the environment.
<b>Recovery</b>
Using waste products as a replacement for <b>other products</b> , e.g. repurposing waste concrete into bricks for building. Recovery of waste reduces the amount of materials going to landfill which limits disruption to natural habitats.
<b>Burial</b>
Dumping waste into areas designated for waste, e.g. landfill sites. Burial as a form of waste is unsustainable as it disrupts the natural environment, and many waste products take <b>a long time to break down</b> , meaning a lot of space is necessary. Furthermore, waste produces waste gases when it breaks down such as methane (a greenhouse gas).



### Submergence

Dumping waste into **oceans**. This has many harmful environmental effects, such as disruption of marine life and the release of **harmful/toxic chemicals into the water supply**. Many countries still dump waste into the ocean despite it being illegal, such as China, which dumped 200.7 million cubic metres of waste into coastal waters in 2018.

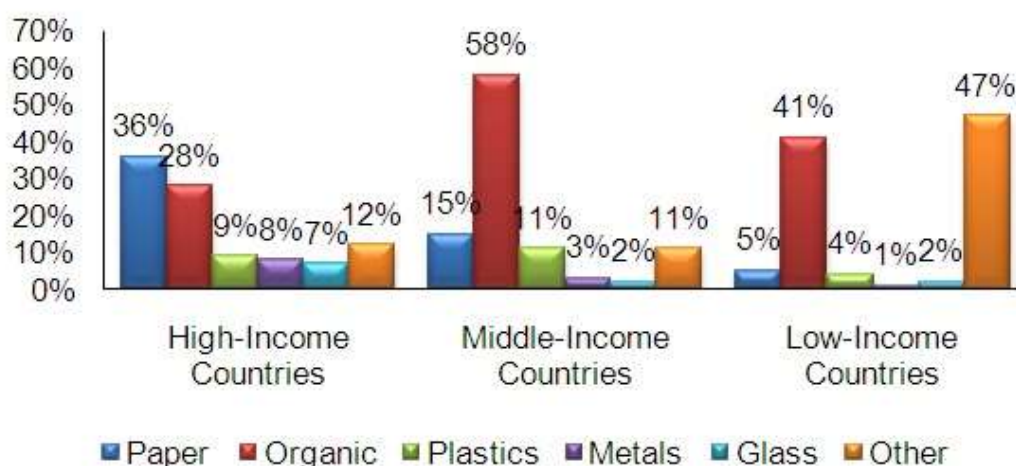
### Trade

Selling waste to other countries so that **other countries can process** it. Trading waste can mean that waste is disposed of efficiently by systems that are designed to manage large amounts of waste, however if countries do not manage the waste effectively it can cause environmental issues. Also, waste must be **transported**, which requires energy.

## Waste in Contrasting Urban Areas

Waste differs in countries with **different levels of development** and **different attitudes towards waste management**.

- The **type of waste produced** differs between countries with varying levels of development. High-income countries produce less organic waste than middle-income and low-income countries, for example.



(Source: UNDESA, 2010).

- Developed countries are increasingly developing into **consumerist** societies, where there is a **'throw-away'** culture. Waste is excessive, such as unnecessary packaging, which makes processing difficult and expensive.

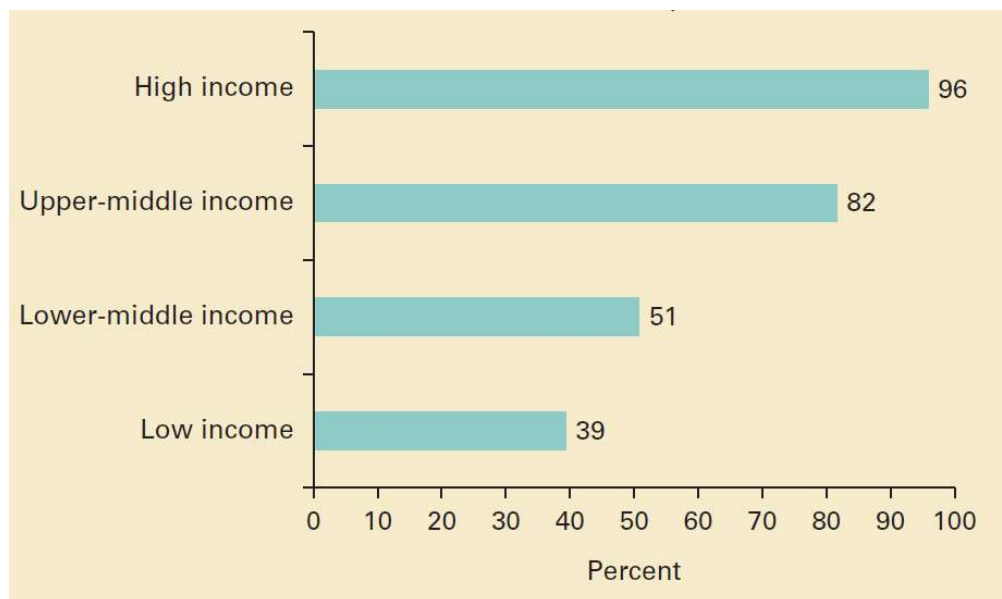
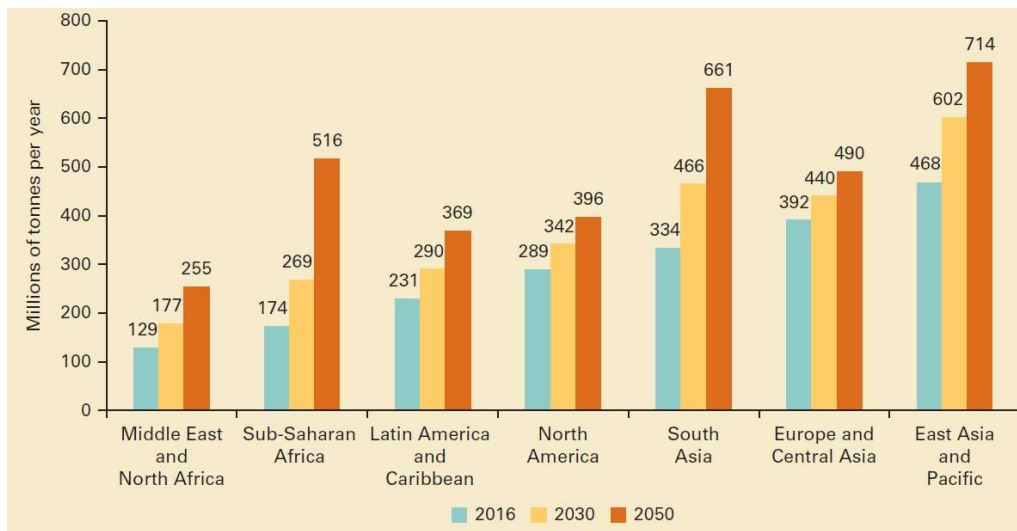
**Black plastic packaging cannot be recycled.**

(Source:

<https://you.38degrees.org.uk/petitions/tesco-stop-using-black-plastic-packaging/>).



3. Developed countries usually produce more waste, but developed countries have better systems in place to **collect waste**. According to the World Bank, in low-income countries, over 90% of waste is burnt or dumped in unregulated areas.



(Source: [https://datatopics.worldbank.org/what-a-waste/trends\\_in\\_solid\\_waste\\_management.html](https://datatopics.worldbank.org/what-a-waste/trends_in_solid_waste_management.html))

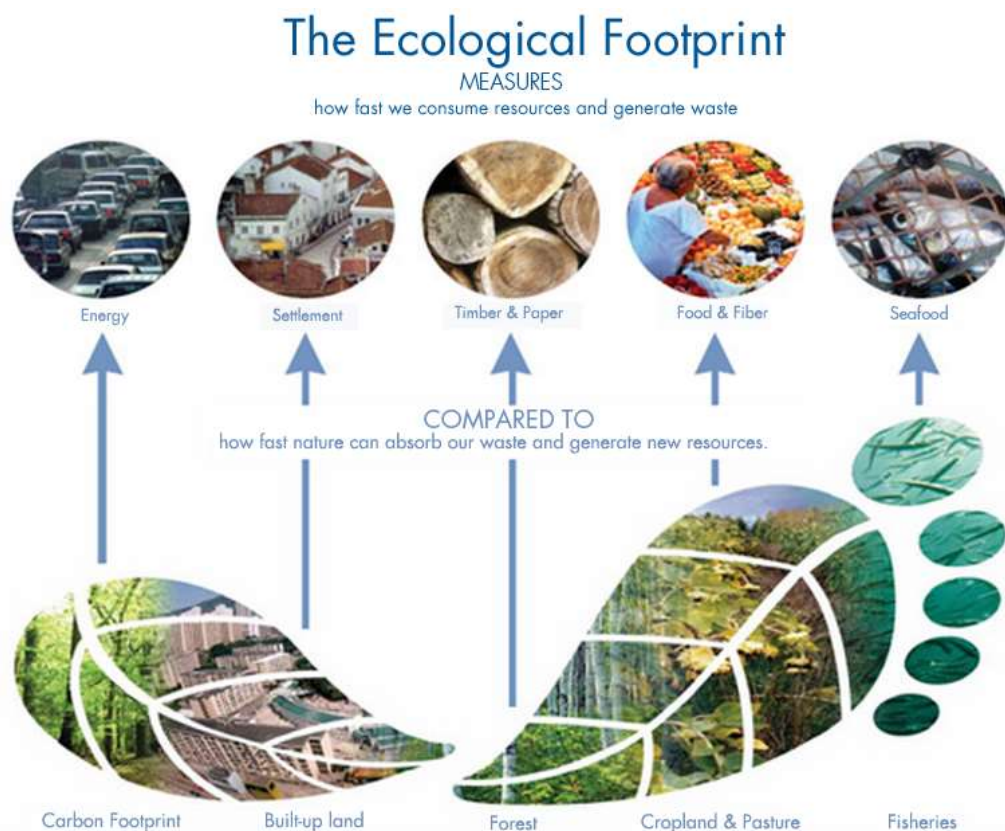
## Sustainable Urban Development

Urban areas have multiple effects on their environment over different scales. **Emissions** can cause **air pollution** locally - affecting health - but may also contribute to atmospheric CO<sub>2</sub> levels and **global warming**. Urban populations can produce **waste** that affects places locally (e.g. **littering**) but also all over the world (e.g. **plastic pollution in the oceans** affecting marine life everywhere). Therefore, it is important that urban areas are **sustainable in their practices**, and their negative effects on the world can be minimised.



## The Ecological Footprint of Urban Areas

An ecological footprint is a measure of **how much we consume** in comparison to **how much the Earth can regenerate**. A larger footprint means consumption is large compared to the Earth's ability to deal with waste/make new resources.



(Source: <https://www.footprintnetwork.org/our-work/ecological-footprint/>)

Urban areas have a higher ecological footprint than rural areas due to different reasons, although this differs depending on the urban area:

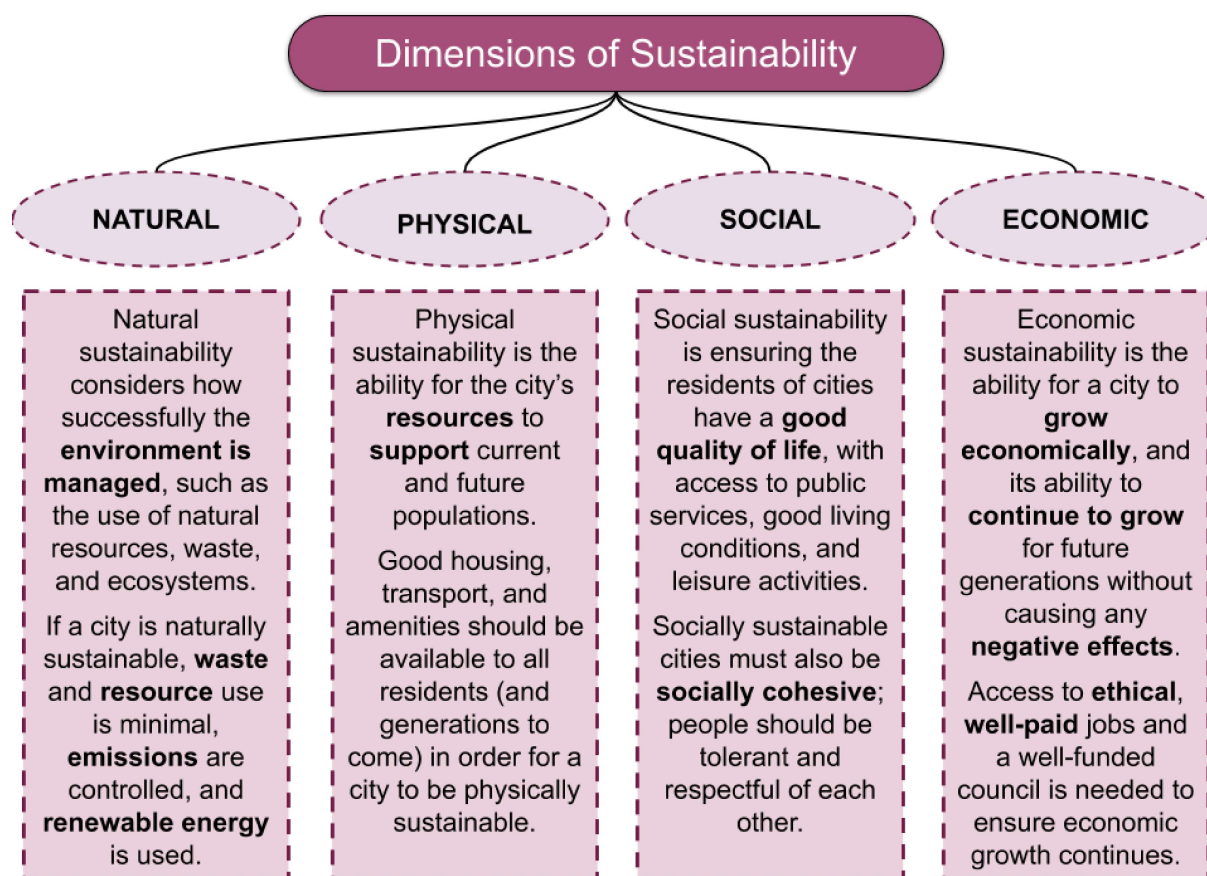
- **Transport** - the **large amount of cars** and other forms of transport means urban areas consume a great deal of **fossil fuels**, and emit a lot of waste gases. Some urban areas have policies to ensure **more efficient public transport**, which reduces the size of their ecological footprint.
- **Building materials** - urban areas need materials in order to grow, which come from natural resources. If an urban area is **larger** or is developing at a **fast rate**, more resources are needed, which is a larger strain on the Earth. Slow development can lower an ecological footprint as it allows time for the Earth to naturally produce more materials for development.
- **Needs of the population** - Larger populations consume **more things**, leading to more waste and a higher ecological footprint.





## Dimensions of Sustainability

In order to be sustainable, the activities within cities need to support the **current population**, but not in a way that damages the ability for future generations to also be supported. Cities can be sustainable in different ways:



Overall, sustainability encompasses the concept of **liveability**. Liveability refers to how **able** a resident is to have a **good quality of life**. This encompasses all aspects of life, such as: job prospects, leisure activities, access to good public services like schools, healthcare, police, safety, sanitation, living conditions and environment. Sustainable cities must be liveable in the present and in the future.

## Developing Contemporary Sustainable Cities

Opportunities	Challenges
The <b>importance</b> of living sustainably is now well-understood, meaning <b>investments</b> and <b>research</b> into sustainable cities are growing, and more people want to live sustainably.	<b>In LICs</b> especially, cities do not have enough money to invest in <b>expensive</b> sustainable ways of living, e.g. changing transport to be renewable, changing layouts of cities etc.
<b>Investments</b> into cities are more common than rural areas as they benefit more people.	<b>Fast urbanisation rates</b> makes it difficult to meet the needs of an ever-growing population.
<b>Services</b> can be implemented easily to many people as there is a high population density.	<b>Lifestyle habits</b> need to change - many do not want to change as they are comfortable.



## Strategies to Develop Sustainable Cities

- Reducing waste - urban areas produce **huge amounts of waste**, which is unsustainable **environmentally, physically**, and **economically**. Waste can be reduced through implementing **effective recycling facilities**, encouraging **composting**, and introducing **farmers' markets** to reduce food packaging waste.
- Transport - one of the biggest issues in urban areas is the **number of vehicles**. The need for transport will never cease in cities as people need to travel for work, shopping, and leisure. Therefore, sustainable methods of transport need to be introduced.

For example, **Zurich** has developed their public transport services to stop the reliance on cars, with bus and tram stops every **300 metres** in the city, and there are low fares, which is an incentive for people to use public transport.

- Green space - introducing green spaces into cities is a great way to improve the **environment of a city**, making it more sustainable. Green spaces such as green roofs or parks can reduce the effects of pollution or flooding, as well as making the area more attractive and pleasant for its residents. This improves the city's **physical and natural sustainability** as well as its **social sustainability**.



(Source: <https://medium.com/@globechain/the-smart-way-to-build-sustainable-cities-607804f3c3f2>)

- Efficiency of buildings - urban structures can be made more **efficient**, which enhances the sustainability of cities. Ways to improve the efficiency of buildings are constantly developing, and there are endless ways to do it.

For example, buildings can be built to have south facing windows or have **efficient insulation** to reduce heating needs. Rainwater harvesting can be used for toilets, and using renewable energy such as building solar panels on the roof can **reduce the need for natural resources**. Smart meters can also be installed so people can monitor their usage, and this also gives an **incentive** to save money.

